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Under the patronage of H.H. Sheikha Latifa bint Mohammed bin Rashid Al Maktoum, Chairperson of the Dubai Culture & Arts Authority (Dubai Culture), the United Nations Development Programme (UNDP) and the Mohammed bin Rashid Al Maktoum Knowledge Foundation (MBRF) today unveiled the Global Knowledge Index leaders for 2021, in its fifth edition in a row, which aims to measure knowledge globally as a comprehensive closely connected with sustainable development and with different dimensions of modern human life. Please read more on Page 4





1St NMI Gulf Future Conference

On 30 November 2021, the North Africa and Middle East Initiative (NMI) of the Federation of German Industry held the 1st NMI Gulf Futures Conference (GFC) in Dubai. The event was jointly organized with the German Emirati Joint Council for Industry and Commerce (AHK) and was held under the patronage of the German Federal Ministry for Economic Affairs and Energy.

In her opening remarks, HE Sara Al Amiri Minister of State for Advanced Technology, welcomed the good cooperation between Germany and the UAE and highlighted her recent visit to Bavaria and the wide-ranging agreement signed with Siemens as examples of that cooperation. HE Sara Al Amiri further shared the UAE's ambitions for the future, highlighting plans to develop a hydrogen economy, diversifying the UAE's trade relations, positing the UAE as a launch pad for the region and internationally, and focusing on agile government and regulatory innovation in new fields such as biotech and precision medicine.

HE Peter Fischer, German Ambassador to the UAE, lauded the progress the UAE made in a short period of time and acknowledged the deep pool of talent present in the UAE. According to Fischer, both the UAE and Germany are platform economies that provide access to large and advanced markets. Fischer further noted that Germany should follow the UAE by refocusing its attention from trade to shared investment in order to create value. NMI Chair Ralf Wintergerst similarly lauded the great progress of the UAE, but highlighted that the regulatory landscape of the region remained fragmented and that foreign companies still have to confront the difficulty of comply-



ing with different regulatory standards not only between the UAE and other Gulf countries, but also between Abu Dhabi and Dubai.

During a first session, which focused on energy transition speakers discussed the opportunities that Europe's energy transition offers to the Gulf countries, in particular in the areas of hydrogen production.

Dr. Cetin Nazikkol, CEO Regional Platform Asia, Pacific & Africa, Thyssenkrupp AG, underlined the great challenge of greening industrial production, noting that the current costs for de-carbonizing 1 million tons of steel was USD 1 billion. Companies are unable to afford this and will have to rely on governments and markets to raise the capital required for the transition.

Nazikkol further underlined Thyssenkrupp's already rapidly growing need for hydrogen, which will rise to 75,000 in 2025 and to 750,000 by 2050. To meet these needs Thyssenkrupp is looking for long-term supply contracts of over 10 years that will help boost production and create planning security. Nazikkol also noted that there was a great opportunity for German companies when it comes to supplying the necessary technology, in particular in the area of electrolysers.

Michael Bueker, Senior Vice President Finance Middle East Siemens Energy Middle East & UAE confirmed this growing demand and the opportunity it brings, but also noted that hydrogen on its own was not sufficient to drive the energy transition. There is a need for resilient grids and to quickly move from testing to scaling solutions to sustain the energy transition.

HE Yousif Ahmed Al Ali, Assistant Undersecretary for Water, Electricity & Future Energy Affairs, UAE Ministry of Energy and Infrastructure, highlighted that the Gulf has the resources and infrastructure that are required to produce hydrogen at scale and that regulatory frameworks were also being developed. Al Ali further noted that the UAE has already exported its first shipment of blue ammonium and predicted that blue rather than green products would be the focus of future exports. Rather than producing



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green fuels, the UAE is well placed to produce green products.

Panelists further pointed out the enormous potential of the hydrogen market, which is forecasted to reach a size of USD 600 billion by 2050 and took an upbeat position with regards to the prospect of industry and businesses adapting and meeting the challenges ahead.

In a second session, which focused on supply chains, participants discussed the impact on global supply chains of recent developments connected to the COV-ID-19 pandemic and more generally.

Jens Dallendoerfer, Chief Sales Officer, Wilo Gruppe, noted that Wilo had set up a "Go Ahead Task Force" to evaluate these questions at an early stage. The results of the task force indicate that we are moving into a period of globalization 2.0 with a focus on producing "local for local." This required big adjustments to existing supply chains and networks.

Mohamed El Ghamry, Country Head of Global Trade and Receivable Finance, HSBC Bank Middle East, provided the view from finance on the changes to supply chains. El Ghamry highlighted that there was a greater need for financial institutions for three reasons. There was a greater need to invest in securing raw material and logistics; there is a greater focus on nearshoring; and there is a shift from "just in time" to "just in case" production. The latter requires more stocks and hence more financing.

Jens Dallendoerfer, further underlined that these changes made a focus on attracting talent to the right places more important. In that respect, Dubai has a huge advantage over many other places, because of its attractiveness and deep pool of talent from around the world.

To start off the final session on digital futures, Professor Sahin Albayrak, Founder and CEO, DAI-Labor Technical University Berlin, presented his plans for building a AI-Mobility-OS in Berlin and the progress and developments that were going on in the field of mobility.

Mohammed Al Qasim, Director of Science and Technology Adoption and Development, UAE Ministry of Industry & Advanced Technology, highlighted the UAE's ambitious plans in the area of digitalization, including the intention to close 50% of government offices by 2023, which will be replaced by a 100% digital government service experience. Al Qassim further highlighted the ongoing plans for "Operation 300 billion" in which the UAE seeks to double the contribution from industry over a two years period. This involves a large scale partnership with Siemens to move UAE business into the fourth industrial revolution. The ambition is for UAE businesses to compete globally. Tareq Barto, Chief Operating Officer, talabat, highlighted that the focus is increasingly on Q-commerce, which revolves around the very fast delivery of products to customers everywhere, anytime. Talabat is not only using automated delivery bots at EXPO, but also is about to launch a delivery drones project in the UAE. All panelists agreed that public private partnerships and testing environment, as well as massive data, were essential to drive forward digitalization to new levels.

The organizers concluded the event by highlighting the enormous potential of all of these changes for further driving forward UAE-Germany relations and the large appetite from all sides to strengthen collaboration. Both the UAE and Germany are trade and talent driven economies, according to the organizers, and as such have a deep potential to further enhance their cooperation.

UAE ranks first regionally,11th globally in Global Knowledge Index

	RANK	VALUE	Global Knowledge Index
PRE-UNIVERSITY	6	80.9	Pre-University Education Enabling Environment
EDUCATION	o ö	00.9	Pre-oniversity Education
TECHNICAL AND VOCATIONAL		70.1	
EDUCATION AND TRAINING			
HIGHER	16	64	Vocational Education and Training Economy
EDUCATION			and training
RESEARCH, DEVELOPMENT	28	42	
INFORMATION AND	14	65.9	Higher Education Technology
COMMUNICATIONS TECHNOLOGY			rechnology
ECONOMY	2	79.8	Research Development and Innovation
	2	77.0	
ENABLING	07	10.2	🔲 United Arab Emirates 📰 Very High Human Development 📰 World Average
ENVIRONMENT	27	69.3	

Under the patronage of H.H. Sheikha Latifa bint Mohammed bin Rashid Al Maktoum, Chairperson of the Dubai Culture & Arts Authority (Dubai Culture), the United Nations Development Programme (UNDP) and the Mohammed bin Rashid Al Maktoum Knowledge Foundation (MBRF) today unveiled the Global Knowledge Index leaders for 2021, in its fifth edition in a row, which aims to measure knowledge globally as a comprehensive closely connected with sustainable development and with different dimensions of modern human life.

In this year's edition, the knowledge index included 155 variables, selected by more than 40 international sources and data bases.

The results of global knowledge index for the year 2021 unveiled that Switzerland came in the first place globally for the fifth year in a row, followed by Sweden, the US, Finland and the Netherlands. While the UAE was ranked 11th globally and first in the Arab World at GKI 2021.

Switzerland has retained its top ranking for the fifth consecutive time this year.

"The world is not completely out of the grip of COVID-19, but without doubt what stands out as we negotiated these trying times, is the relentless quest for knowledge that led us to develop vaccines as well as remedial and precautionary measures against the virus. Obviously, this continuing focus on knowledge and its triumph is what has led us to bring back careful normalcy in our daily life, and what has enabled this face-to-face meeting today," said Jamal bin Huwaireb, CEO, MBRF.

He said this year there has seen an extended participation in GKI endeavor, globally as well regionally, signifying the increased commitment towards reinforcing knowledge as a key driver for economic and social growth. The Arabic countries which debuted this year included Iraq and Palestine, joining the portfolio of 16 regional countries in the index.

Globally, the country level participation at GKI 2021 was at 154, compared to 138 last year.

Oher countries in the GKI global leader list up to the 100th position included Qatar at the 38th place, Kingdom of Saudi Arabia at 40, Kuwait (48), Oman (52), Egypt (53), Bahrain (55), Tunisia (83) and Lebanon (92). Morocco was at 101 globally, followed by Jordan (103), Algeria (111), Iraq (137), Sudan (145), Mauritania (147) and Yemen (150).

"When the word stands at these challenging cross roads, the increased global participation at GKI is a robust indicator of how knowledge is the single most factor that will help world nations prosper and lead in front for the benefit of posterity with sustainable focus. In this context, the GKI series has developed into an accepted and prudent benchmark in assessing knowledge-based societies and their growth," said Dena Assaf of the UN.

"It is encouraging to see that in certain key branch indexes that drive knowledge, innovation and education, Arab countries have been faring well and is firmly on the road to progress. Significantly, it shows the positive impact of the awareness that the new world is largely shaped and led by countries that have an edge in knowledge," said Khaled Abdel-Shafi, Regional Hub Manager, UNDP Regional Bureau for Arab States (RBAS).

The launch ceremony was also immediately followed by a ministerial panel on 'Rethinking Policymaking in the Age of Knowledge,' with the participation of Hussain Al Hammadi - Minister of Education, Dr. Tarek Shawki Minister of Education, Egypt, Ahmed Hanandeh, Minister of Digital Economy and Entrepreneurship, Jordan, Dr. Fadia Kiwan
Director General, Arab Women Organization, and moderated by Dr. Hany Torky -Manager, Knowledge Project, UNDP RBAS.

The average global performance rate at GKI 2021 stood at 48.4 per cent, while for the seven branch indexes of the index, the best performance was for pre-university education at 60.8 per cent, followed by enabling environment (55.3), economy (52.9), technical learning and professional training (51.2), higher education (46.1), ICT (43.3) and research and development and innovation (31.4).

GKI is produced annually since 2017 by the Knowledge Project, a partnership between UNDP-RBAS and MBRF. The index includes 155 variables, selected from over 40 sources and international data bases including the UNESCO, World Bank, ITU, International Monetary Fund (IMF), Organisation for Economic Cooperation and Development (OECD), International Labour Organisation (ILO) etc.

"Over the years the Knowledge Project and GKI have been able to facilitate a strategic and forward looking policy push among countries and decision makers to give more weightage to knowledge-centric development. This shift in developmental vision is imperative in times when sustainability has also become a core issue that needs to be addressed with alacrity, and the institution of GKI has added immense value to this context," said Dr. Hany Torky, Manager, Knowledge Project, UNDP RBAS.

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Dubai Has World's First Paperless Government

H.H. Hamdan bin Mohammed: We launched the Dubai Paperless Strategy in 2018, and today, we proudly announce that the Strategy has met 100% of its objectives and within the set timeline.

45 government entities in Dubai announces cutting paper consumption by more than 336 million papers

The Strategy also helped save more than AED1.3 billion and over 14 million manhours across the Dubai Government

This achievement reinforces Dubai's competitiveness as a world-leading digital capital

Today marks the beginning of a new stage in Dubai's journey to digitize life in all its aspects ensuring customer's happiness

https://twitter.com/HamdanMohammed/status/1469631730286047238



Expo 2020: Blueprint for Smart Cities And A Better Life

Improving everyday life takes foresight, imagination and a sense of purpose. Advances in technology alone are not enough to secure progress. To quote Steve Jobs, one of the greatest visionaries of our time: "The people who are crazy enough to think they can change the world are the ones who do."

SIEMENS SMART INFRASTRUCTURE

Humanity has dreamt about utopia – the place where everything is perfect – for centuries. Yet that vision is different for every one of us. The lowest common denominator for a modern utopia – as we face the 21st century challenges of population growth, global warming and rapid urbanization – is a connected, resource efficient, and sustainable environment.

Smart cities have been a long time coming. Now, advances in artificial intelligence, 5G, cloud technology, big data and the internet of things, are aligning reality with user expectations. Pundits agree: a city is smart when public and private sectors use technology and cooperate for the well-being of citizens, for environmental sustainability and prosperity.

Dubai's Expo 2020 campus is arguably the world's best example to date of a purpose-built, connected urban environment. Siemens has made it a blueprint for future smart cities. With over 130 connected buildings, on an area twice the size of Monaco, Expo 2020 Dubai is using technology to make it the most digitalized, sustainable, and secure international fair in the 170-year history of world exhibitions.

Expo 2020 Dubai is the first Expo to be held in the Middle East, Africa and South Asia. Its smartness hinges on MindSphere, Siemens' cloud-based operating system, in which data generated by elevators, air-conditioners, lights and other hardware are linked and brought into relation with each other to obtain new insights and reshape urban living.

Creating the future

Powered by AI, separate platforms to manage energy, smart-buildings and security work together to create synergy and efficiency. They allow building managers to control functions such as cooling, air quality, access and fire alarms – in real time using an app.

This isn't technology for its own sake. It draws information from 210,000 data points, 5,500 doors and over 15,000 cameras to optimize operations, reduce emissions, enhance visitors' comfort and security – all at once, seamlessly. It saves energy. It balances the peaks and troughs of renewable power. It optimizes battery storage and e-mobility charging.

Expo 2020's theme is "connecting minds and creating the future." It speaks to smart cities' potential: Smartification will transform city administration, transportation, health and public safety – a process some analysts expect to generate global economic benefits of \$20 trillion through 2026.

That's why investments to make cities smarter are predicted to more than double from \$100 billion in 2021 to \$250 billion in 2030. Much will be by the private sector – in smart buildings and smart microgrids – as well as by government. Everyone will benefit as technology makes fast-growing cities more resilient.

A decarbonizing world needs cities that can better integrate renewable power from roof-top solar panels and wind turbines. It needs cities that are better able to manage traffic flows, more efficient in their management of water and wastewater, cities with clean air and efficient government.

Happiest city on earth

H.H. Sheikh Mohammed bin Rashid Al Maktoum's vision is to make United Arab Emirates one of the best countries in the world. For many, Dubai's skyline epitomizes the city of the future. And the Smart Dubai Government initiative has digitalized the administration, serving citizens at the touch of an app, and becoming paperless in the process. The ultimate aim: to make Dubai the "happiest city on earth."

Science fiction has shown us many visions of what may come. Happy doesn't always figure large. The world's first smart city, Metropolis, was born nearly 100 years ago in Berlin, in the minds of moviemaker Fritz Lang and his wife, Thea von Harbou. It was a dystopia, a story of its era.

The modern vision of a smart city is different. Technology is a necessity, not a luxury. If digitalization is the brain, then sustainability is the heart. We need it to decarbonize our world and future proof our urban centers. To make cities efficient, responsive, and fit for the challenges we see coming – sustainability, population growth and rapid urbanization – and for the ones that will surprise us.

City smartness is a question of degree – and intent. The Smart City Index was created in 2019 by Switzerland's Institute for Management Development and the Singapore University for Technology and Design. Its ranking is based on economic and technological data, as well as citizens' perceptions. Last year, the top places went to Singapore, Helsinki and Zurich – Berlin ranked 38th, Dubai 43rd, Madrid 45th.

Expect that ranking to change next year. After Expo ends, its smart infrastructure will be used to create a new, human-centric community in Dubai South, called District 2020. This innovation-driven ecosystem and mixed-use development will evolve in the years ahead, with Siemens as an anchor tenant.

We're making the whole city comfortable, safe and efficient by focusing on the human experience. Expo 2020 is a showpiece project for Siemens as a whole, illustrating the breadth and scope of our technology. Different businesses, one purpose: making the world a better place to live.

And yet digitalization is just a tool. Our intentions are what will shape smart cities into that which they should be: sustainable, connected, and prosperous with clean water, safe mobility and green power for all. In short: wonderful. As another American, Abraham Lincoln, once said: "The most reliable way to predict the future is to create it."

https://www.forbes.com/sites/siemens-smart-infrastructure/2021/12/14/why-buildings-and-charging-infrastructure-go-hand-in-hand/?sh=72b917cf39b3_



A blueprint for smart cities

Working together, Siemens and Expo 2020 Dubai have created a unique blueprint for smart cities and districts, based on the Internet of Things.







Twice the size of Monaco

Once Expo finishes, the 4 square kilometre site – twice the size of Monaco – will live on, as District 2020. 80% of its assets will remain, and become a future city.



16 different data cases

These cover aspects such as indoor and outdoor air quality, energy and water consumption, noise control, crowd management and ecology.



ensuring a safe, comfortable and sustainable experience +130 buildings on Siemens Navigator

+15,000 connected cameras the world's largest installation of Siveillance Control Pro

+5500 doors connected to Sipass Integrated

+210,000 Desigo CC data points for site-wide building management



Women need to remove all the barriers and influence the business world for a better tomorrow by working together.This was echoed by speakers at the @AHKua Business Women Forum, held at #Expo2020 () #Dubai. @MoFAICUAE @BMWi_Bund 1/2



3-38 PM - Dec 7, 2021 - Twitter for iPhon

UAE Embassy in Berlin ♥ @UAEInBerlin ► Account der Regierung von Vereinigte Arabis

HE MoS @SarahAmiri1 and Dr. Roland Busch @BuschRo, CEO of @Siemens AG, together announced the launch of a bilateral future project to advance cooperation in a joint #4IR programme as part of the #UAE Industry 4.0 strategy. @MoFAICUAE @ΜοΙΔΤΙΙΔΕ



3:18 PM · Nov 29, 2021 · Twitter Web App

UAE Embassy in Berlin @UAEinBerlin M Account der Regierung von Vereinigte Arabische Emirate ۲

In Munich, HE @SarahAmiri1 and Dr. Roland Busch @BuschRo, CEO of @Siemens AG, highlighted the excellent cooperation between the #UAE and the tech company in a multitude of different projects, especially #Expo2020 (2000), and discussed future outlooks. @MoFAICUAE #Siemens @expo2020dubai



3:17 PM · Nov 29, 2021 · Twitter Web App

UAE Embassy in Berlin 🤣 @UAEinBerlin ۲ Account der Regie

At the @BMWStartups Garage, HE Minister of State @SarahAmiri1 spoke about the future of #mobility and possibilities of enhancing cooperation in the area of next-generation vehicles with @BMWGroup Senior Vice President, New Technologies, Dr. Rudolf Bencker. @MoFAICUAF @MoIATUAF



UAE Embassy in Berlin @UAEinBerlin N Account der Regierung of ۲ Account der R

HE @SarahAmiri1 met HE @HubertAiwanger, Bavarian Deputy Minister-President & Minister of State for Economy, Regional Development & Energy and the Deputy Minister for Economy, HE @rolandweigert, to discuss advancing bilateral economic + energy cooperation. @MoFAICUAE @MoIATUAE



1:15 PM · Nov 25, 2021 · Twitter for iPhone



HE @SarahAmiri1 visited the Munich Center for #Quantum Science & #Technology Walther-Meissner-Institut of the Bavarian Academy of Sciences @badw_muenchen & spoke w/ Director Prof. Dr. Stefan Filipp about cooperation in research & academic exchange.@MoFAICUAE @MoIATUAE @quantumWMI



10:28 AM · Nov 25, 2021 · Twitter for iPhone



In a meeting with Bavarian Minister of State for Digital Affairs, @gerlach_judith, HE MoS @SarahAmiri1 discussed cooperation between the #UAE and #Bavaria in the areas of #digitization, ntellig #ArtificialIntelligence, and #quantum #technologies @MoFAICUAE @MoIATUAE @DigitalBayern



3:30 PM · Nov 24, 2021 · Twitter for iPhone

UAE Embassy in Berlin 🤣 @UAEInBerlin 🏲 Account der Regierung von Vereinigte Arab ۲

HE MoS for Advanced Technology @SarahAmiri1 met HE @MelanieHuml, Bavarian MoS for European & Int'l Affairs, to discuss bilateral relations and the advancement of cooperation with the Free State of #Bavaria, esp. in the areas of #newtechnology & #energy. @MoFAICUAE @MoIATUAE



11:14 AM · Nov 24, 2021 · Twitter for iPhone

UAE Embassy in Berlin ۲ Account der Regi

HE @SarahAmiri1 discussed bilateral cooperation with focus on the development of drugs against severe diseases with Prof. Dr. Horst Domdey, Managing Director of the IZB, one of the top 10 renowned biotechnology centers in the world. @MoFAICUAE @MoIATUAE



Imprint

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